

[illegible]

(2) 50
(3) 63
(4) 100

HISTORY
DECLARATIONS
OTSSCVTFP_R9
; Detailed Current Edit History

```

0000 1      .TITLE  OTSSCVTFP_R9      Convert Floating to Packed
0000 2      .IDENT  /1-005/           ; File: OTSCVTFP.MAR Edit: PLL1005
0000 3
0000 4
0000 5      *****
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0000 24     *
0000 25     *
0000 26     *****
0000 27
0000 28
0000 29     FACILITY: LANGUAGE INDEPENDENT SUPPORT
0000 30     ++
0000 31     ABSTRACT:
0000 32     This module contains the routine that converts floating
0000 33     numbers to packed.
0000 34
0000 35
0000 36     --
0000 37
0000 38     VERSION: 1
0000 39
0000 40     HISTORY:
0000 41
0000 42     AUTHOR:
0000 43     Marty Jack, 14-Mar-1979
0000 44
0000 45     MODIFIED BY:
0000 46
0000 47
0000 48

```


OTSSCVTFP_R9
1-005

Convert Floating to Packed
HISTORY ; Detailed Current Edit History

G 13

16-SEP-1984 00:23:47 VAX/VMS Macro V04-00
6-SEP-1984 11:12:56 [LIBRTL.SRC]OTSCVTFP.MAR;1

Page 2
(2)

```
0000 50      .SBTTL HISTORY      ; Detailed Current Edit History
0000 51
0000 52
0000 53      ; Edit History for Version 1 of OTSCVTFP
0000 54      ;
0000 55      1-001 - Original. MLJ 14-Mar-1979
0000 56      1-002 - Make external references explicit. RKR 17-JULY-1979
0000 57      1-003 - Change all references to FOR$CNV_OUT_E to COB$CNVOUT
0000 58      RKR 27-SEPT-79
0000 59      1-004 - Cosmetic changes. RKR 18-OCT-79
0000 60      1-005 - Change source name to OTSS but retain old entry point name.
0000 61      PLL 21-Jan-82
```

OT
Sy

DS
DS
LI
OT
OT
OT

PS
--
\$A
_0

Ph
--
In
Co
Pa
Sy
Pa
Sy
Ps
Cr
As

Th
90
Th
22
8

Ma
--
_S
19
Th
MA

```

0000 63      .SBTTL  DECLARATIONS
0000 64
0000 65 :
0000 66 : INCLUDE FILES:
0000 67 :
0000 68      $DSCDEF
0000 69
0000 70 :
0000 71 : EXTERNAL SYMBOLS:
0000 72      .DSABL  GBL      ; Prevent undeclared symbols from being
0000 73      ; automatically global
0000 74      .EXTRN  OTSS$CNVOUT ; E-format conversion
0000 75      .EXTRN  LIB$STOP    ; Error halt
0000 76      .EXTRN  OTSS$_FATINTERR ; Fatal internal error code
0000 77
0000 78 :
0000 79
0000 80 :
0000 81 : MACROS:
0000 82 :     NONE
0000 83 :
0000 84 :
0000 85 :
0000 86 : PSECT DECLARATIONS:
0000 87 :     .PSECT  _OTSS$CODE      PIC, SHR, LONG, EXE, NOWRT,-
0000 88 :                               USR, CON, REL, LCL, RD
0000 89
0000 90 :
0000 91 : EQUATED SYMBOLS:
0000 92 :     NONE
0000 93 :
0000 94 :
0000 95 :
0000 96 : OWN STORAGE:
0000 97 :     NONE
0000 98 :

```

```
0000 100 .SBTTL OTSSCVTFP_R9
0000 101
0000 102 :++
0000 103 : FUNCTIONAL DESCRIPTION:
0000 104 :
0000 105 : Converts a floating number to packed.
0000 106 :
0000 107 : CALLING SEQUENCE:
0000 108 :
0000 109 : JSB OTSSCVTFP_R9 (scale.rl.v, src.rf.r, dstlen.rl.v, dst.wp.r)
0000 110 :
0000 111 : Arguments are passed in R6, R7, R8 and R9.
0000 112 :
0000 113 : INPUT PARAMETERS:
0000 114 :
0000 115 : SCALE.rl.v The power of ten by which the internal
0000 116 : representation of the source must be
0000 117 : multiplied to scale the same as the
0000 118 : internal representation of the dest.
0000 119 : SRC.rf.r The number to be converted
0000 120 : DSTLEN.rl.v The number of digits in the destination
0000 121 :
0000 122 : IMPLICIT INPUTS:
0000 123 :
0000 124 : All of the trap bits in the PSL are assumed off.
0000 125 :
0000 126 : OUTPUT PARAMETERS:
0000 127 :
0000 128 : DST.wp.r The place to store the converted number
0000 129 :
0000 130 : IMPLICIT OUTPUTS:
0000 131 :
0000 132 : NONE
0000 133 :
0000 134 : FUNCTION VALUE:
0000 135 :
0000 136 : 1 = SUCCESS, 0 = FAILURE
0000 137 :
0000 138 : SIDE EFFECTS:
0000 139 :
0000 140 : Destroys registers R0 through R9.
0000 141 :
0000 142 :--
0000 143 :
0000 144 :
0000 145 OTSSCVTFP_R9::
0000 146 COBSCVTFP_R9::
5E 30 C2 0000 147 S0BL2 #48,SP ; Allocate temp space
6E 67 56 0003 148 CVTFD (R7),(SP) ; Get input number
0006 149 :
0006 150 : Make a descriptor for the temporary string.
0006 151 :
0006 152 : PUSHAB 8(SP) ; Address = space reserved
7E 08 AE 9F 0009 153 MOVB #DSC$K_CLASS_S,-(SP) ; Class = static
7E 01 90 000C 154 MOVB #DSC$K_DTYPE_T,-(SP) ; Data type = ASCII string
7E 0E 90 000F 155 MOVW #38,-(SP) ; Length in bytes
0012 156 ;
```



```
0012 157 : Call OTSS$CNVOUT.
0012 158 :
0012 159 :
0014 160 :         PUSHL    #31                ; Digits in fraction
0017 161 :         PUSHAB   4(SP)                ; Output string descriptor
001A 162 :         PUSHAB   16(SP)                ; Number to convert
0021 163 :         CALLS    #3,G^OTSS$CNVOUT      ; Call conversion routine
0024 164 :         BLBC     R0,20$                ; Should never fail
0024 165 :
0024 166 :         Convert the exponent and correct for scale factor.
0024 167 :
0024 168 :         CVTSP     #2,51(SP),#2,(SP)    ; Make packed exponent
002A 169 :         CVTPL     #2,(SP),R0           ; Make longword exponent
002E 170 :         MOVAB     -31(R6)[R0],R6       ; Correct for fraction size and scale
0033 171 :
0033 172 :         Convert the fraction to packed.
0033 173 :
0033 174 :         MOVVB     16(SP),18(SP)        ; Move sign over "."
0038 175 :         CVTSP     #31,18(SP),#31,(SP)  ; Make packed fraction
003E 176 :         ASHP      R6,#31,(SP),#0,R8,(R9) ; Scale to destination
0045 177 :                                     ; (also clears R0)
0045 178 :         BVS       10$                  ; Branch if overflowed
0047 179 :         INCL      R0                   ; Indicate success, R0 = 1
0049 180 :         ADDL2     #56,SP               ; Delete stack temps
004C 181 :         RSB
004D 182 :
004D 183 :         Come here on failure of OTSS$CNVOUT. This should never happen.
004D 184 :
004D 185 :         20$:    PUSHL    #OTSS$FATINTERR ; OTS fatal error message
0053 186 :         CALLS    #1,G^LIB$STOP        ; Signal and don't return
005A 187 :         .END
```

00000000'GF 04 AE 9F 0014 160
10 AE 9F 0017 161
03 FB 001A 162
29 50 E9 0021 163

6E 02 33 AE 02 09 0024 167
50 6E 02 36 002A 168
56 E1 A640 9E 002E 169

69 58 00 1F 12 AE 10 AE 90 0033 173
12 AE 1F 09 0038 174
6E 1F 56 F8 003E 175
02 1D 0045 176
50 D6 0045 177
5E 38 C0 0047 178
05 0049 179 10\$: ADDL2 #56,SP

00000000'8F DD 004D 184
00000000'GF 01 FB 0053 185
005A 186
005A 187

OTSSCVTFP R9
Symbol table

Convert Floating to Packed

K 13

16-SEP-1984 00:23:47
6-SEP-1984 11:12:56

VAX/VMS Macro V04-00
[LIBRTL.SRC]OTSCVTFP.MAR;1

Page 6
(4)

COBSCVTFP R9
DSCSK_CLASS_S
DSCSK_DTYPE_T
LIB\$STOP
OTSSCNVOUT
OTSSCVTFP R9
OTSS_FATINTERR

00000000 RG 02
= 00000001
= 0000000E
***** X 00
***** X 00
00000000 RG 02
***** X 00

+-----+
! Psect synopsis !
+-----+

PSECT name

Allocation

PSECT No.

Attributes

ABS	00000000 (0.)	00 (0.)	NOPI	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPI	USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE
_OTSSCODE	0000005A (90.)	02 (2.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.03	00:00:00.58
Command processing	112	00:00:00.30	00:00:03.59
Pass 1	134	00:00:01.10	00:00:05.75
Symbol table sort	0	00:00:00.11	00:00:00.85
Pass 2	47	00:00:00.35	00:00:00.91
Symbol table output	3	00:00:00.01	00:00:00.01
Psect synopsis output	2	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	329	00:00:01.91	00:00:11.70

The working set limit was 900 pages.

8391 bytes (17 pages) of virtual memory were used to buffer the intermediate code.

There were 10 pages of symbol table space allocated to hold 136 non-local and 2 local symbols.

187 source lines were read in Pass 1, producing 10 object records in Pass 2.

8 pages of virtual memory were used to define 7 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

Macros defined

_\$255\$DUA28:[SYSLIB]STARLET.MLB;2

4

190 GETS were required to define 4 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:OTSCVTFP/OBJ=OBJ\$:OTSCVTFP MSRC\$:OTSCVTFP/UPDATE=(ENH\$:OTSCVTFP)

0211 AH-BT13A-SE
VAX/VMS V4.0

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